

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

## PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To: JOSEPH W. PRICE SNELL & WILMER LLP 600 ANTON BOULEVARD SUITE 1400 COSTA MESA, CA 92626-7689
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Date of mailing (day/month/year)	<b>17 MAY 2006</b>
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Applicant's or agent's file reference  42716-1816	<b>FOR FURTHER ACTION</b> See paragraph 2 below
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International application No.  PCT/US05/29870	International filing date (day/month/year)  23 August 2005 (23.08.2005)	Priority date (day/month/year)  10 September 2004 (10.09.2004)
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International Patent Classification (IPC) or both national classification and IPC  IPC(7): F16L 55/00 and US Cl.: 285/92,354,386
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Applicant  SHUR-LOK CORPORATION
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1. This opinion contains indications relating to the following items:

- ☒ Box No. I      Basis of the opinion
- ☐ Box No. II      Priority
- ☐ Box No. III      Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV      Lack of unity of invention
- ☒ Box No. V      Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI      Certain documents cited
- ☐ Box No. VII      Certain defects in the international application
- ☐ Box No. VIII      Certain observations on the international application

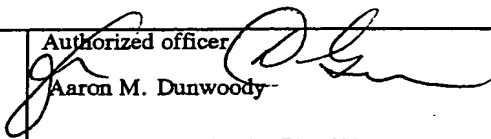
### 2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/ US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	Date of completion of this opinion  10 January 2006 (10.01.2006)	Authorized officer  Aaron M. Dunwoody  Telephone No. (571) 272-3600
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**WRITTEN OPINION OF THE  
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International application No.

PCT/US05/29870

**Box No. I Basis of this opinion**

1. With regard to the language, this opinion has been established on the basis of:

- ☒ the international application in the language in which it was filed
- ☐ a translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

- ☐ a sequence listing
- ☐ table(s) related to the sequence listing

b. format of material

- ☐ on paper
- ☐ in electronic form

c. time of filing/furnishing

- ☐ contained in the international application as filed.
- ☐ filed together with the international application in electronic form.
- ☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

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Box No. V Reasoned statement under Rule 43 *bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)

Claims 1-18 YES

Claims NONE NO

Inventive step (IS)

Claims NONE YES

Claims 1-18 NO

Industrial applicability (IA)

Claims 1-18 YES

Claims NONE NO

2. Citations and explanations:

Please See Continuation Sheet

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

V. 2. Citations and Explanations:

Claims 1-18 lack novelty under PCT Article 33(2) as being anticipated by US patent 5388866, Schlosser.

In regards to claim 1, in Figures 13-15, Schlosser discloses a fluid coupling assembly for retaining a seated joint, comprising:

a first member adapted to be connected to a first fluid conduit and having a first sealing surface, a series of serrations and a first fastening configuration; and

a second member adapted to be connected to a second fluid conduit, a second fastening configuration and enabling a second sealing surface to engage the first sealing surface,

the second member has a plurality of axially cantilevered beams, each beam having at least one tooth of a configuration to engage the series of serrations, an operative engagement of the tooth and serrations enables a relative low force rotation during a sealing engagement of the first sealing surface and the second sealing surface and a relatively higher force resistance to rotation during disengagement.

In regards to claim 2, in Figures 13-15, Schlosser discloses each cantilevered beam has a curvilinear cross section traverse to an axial direction.

In regards to claim 3, in Figures 13-15, Schlosser discloses the cantilevered beams are spaced in an annular pattern with a pair of teeth provided at an axially distal side end of each cantilevered beam.

In regards to claim 4, in Figures 13-15, Schlosser discloses serrations are annularly arranged in a circular pattern about the first member and the axially cantilevered beams have inner and outer diameters that subscribe concentric circles and at least one tooth member on each cantilevered beam projects radially inward from each cantilevered beam inner diameter to engage the circular serrations in a ratcheting manner as the respective teeth undulate over the circular serrations during sealing engagement and disengagement modes of operation.

In regards to claim 5, in Figures 13-15, Schlosser discloses a pair of spaced teeth project radially inward from each cantilevered beam.

In regards to claim 6, in Figures 13-15, Schlosser discloses the circular serrations are formed by truncated teeth with annular axially tapered surfaces and transverse engagement surfaces of different angular dimensions.

In regards to claim 7, in Figures 13-15, Schlosser discloses the cantilevered beam teeth and the circular serrations have the angular dimensions for the engagement surfaces wherein an equal resistance force is provided for both coupling and decoupling.

In regards to claim 8, in Figures 13-15, Schlosser discloses three spaced teeth project radially inward from each cantilevered beam.

In regards to claim 9, in Figures 13-15, Schlosser discloses axial leading surfaces of the serration are chamfered.

In regards to claim 10, in Figures 13-15, Schlosser discloses the location of the tooth and the serrations are to align at their axially leading transverse surfaces when the first member and second member are operatively coupled.

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**Supplemental Box**

In case the space in any of the preceding boxes is not sufficient.

In regards to claim 11, in Figures 13-15, Schlosser discloses a fluid coupling assembly for retaining a sealed joint, comprising:

a first member adapted to be connected to a first fluid conduit and having a first sealing surface, a series of serrations and a first fastening configuration; and

a second member adapted to be connected to a second fluid conduit, a second fastening configuration and enabling a second sealing surface to engage the first sealing surface,

the second member has a plurality of axially cantilevered beams, each beam having a plurality of teeth of a configuration to engage the series of serrations, an operative engagement of the teeth and serrations enables a resistance force rotation during a sealing engagement of the first sealing surface and the second sealing surface and a resistance force rotation during disengagement, the plurality of teeth and serrations remaining in contact with each other when a pre-determined sealing force is reached between the first member and the second member.

In regards to claim 12, in Figures 13-15, Schlosser discloses each cantilevered beam has a curvilinear cross section traverse to an axial direction.

In regards to claim 13, in Figures 13-15, Schlosser discloses the cantilevered beams are spaced in an annular pattern with a plurality of teeth provided at an axially distal side end of each cantilevered beam.

In regards to claim 14, in Figures 13-15, Schlosser discloses the serrations are annularly arranged in a circular pattern about the first member and the axially cantilevered beams have inner and outer diameters that subscribe concentric circles and each tooth member on each cantilevered beam projects radially inward from each cantilevered beam inner diameter to engage the circular serrations in a ratcheting manner as the respective teeth undulate over the circular serrations during sealing engagement and disengagement modes of operation.

In regards to claim 15, in Figures 13-15, Schlosser discloses the resistance force is the same during the sealing engagement and sealing disengagement.

In regards to claim 16, in Figures 13-15, Schlosser discloses a fluid coupling assembly for retaining a sealed joint, comprising:

a first member adapted to be connected to a first fluid conduit and having a first sealing surface, a series of axially aligned serrations and a first fastening configuration; and

a second member adapted to be connected to a second fluid conduit, a second fastening configuration and enabling a second sealing surface to engage the first sealing surface,

the second member includes a hollow cylindrical collar with spaced axial notches forming a plurality of axially cantilevered beams, wherein each cantilevered beam has a curvilinear cross section traverse to an axial direction, each beam having a plurality of teeth of a configuration to engage the series of serrations, an operative engagement of the teeth and serrations enables a resistance force rotation during a sealing engagement of the first sealing surface and the second sealing surface and a resistance force rotation during disengagement, the plurality of teeth and serrations remaining in contact with each other when a pre-determined sealing force is reached between the first member and the second member.

In regards to claim 17, in Figures 13-15, Schlosser discloses one of the serrations and teeth have transverse engagement surfaces of different angular dimensions during a sealing engagement and disengagement to provide a lower force during engagement and a higher force during engagement.

In regards to claim 18, in Figures 13-15, Schlosser discloses the axially aligned serrations are annularly arranged in a circular pattern about the first member and the axially cantilevered beams have inner and outer diameters that subscribe concentric circles and each tooth member on each cantilevered beam projects radially inward from each cantilevered beam inner diameter to engage the circular serrations in a ratcheting manner as the respective teeth undulate over the circular serrations during sealing engagement and disengagement modes of operation.